

Atty. Docket No.: 11CX-124155

In The Specification

Please replace paragraph [0022] with the following replacement paragraph.

[0022] FIG. 1 illustrates the demetallization process on a standard printing press. An image-printed continuous film or paper web 40 which has been metallized on one side by metal layer 44 with registration marks 42 already printed next to one or more of images 43, (indicated as covered by the metal layer in the inset) is moved through the printing or embossing process where images or patterns are pre-printed upon it. If it is rewound into a roll after the printing or embossing, it must be unwound from a continuous roll 1 with the metallized side up. As the web 40 moves to the demetallization station 5 along the press rollers 2 and 3, the registration or eye marks 42 on the web material 40 are read by a registration sensor 4, for example a laser, fiber-optic or similar sensor, which relays the information as a signal to the demetallization station 5. At the demetallization station, the web 40 moves through a bank of press rollers 7, 8, 9 and 10. The speed at which the web 40 travels is determined by the registration information conveyed by the registration sensor 4 to the demetallization station 5 and is controlled by a servo motor 11 attached to the demetallization station. The application of the registration information is determined by a simple computer software program which causes the servo motor 11 to spin faster or slower depending upon the registration information. The servo motor 11 then adjusts the speed of the demetallization station roller 9 and thus the speed at which the web 40 travels in order to ensure that the demetallization occurs exactly where designed in relation to the original images. The demetallization station 5 consists of a printing station 6 as might normally deposit ink, but in this invention deposits a caustic substance or etchant 41, capable of removing metal from the web material 40. This chemical etchant 41, commonly sodium hydroxide (NaOH) in solution, is deposited onto the film 40 through the bank of rollers in relation to the pre-printed images 42 determined by the patterns on design/printing plates mounted on roll 9. The etchant 41 oxidizes the metal 44 to powder in the areas applied. The web 40 is then routed by roller 12 to a washing station 13 where the powder is removed. The web 40 then travels past a drying station 14 where a heat source, for example an infrared light, removes all water from the web surface. The web is then routed by rollers 15 and 16 to rewinding cylinder 17 where it is rewound into a roll.